

IN THE CLAIMS

1. (original) A method for fabricating a laminate composite structure comprising:

layering a plurality of plies of material with interspersed orientations within a stacking sequence to create a solid laminate; and

inserting a plurality of pins into the solid laminate composite, prior to curing the laminate composite, at locations in the geometry of the solid laminate where the solid laminate forms a bend.

2. (original) The method of claim 1 wherein the plurality of pins are composite material inserted substantially normal to the laminate composite surface.

3. (original) The method of claim 1, wherein the location of the plurality of pins extends beyond the bend in the solid laminate.

4. (original) The method of claim 3, wherein the plurality of pins are inserted into the solid laminate with decreasing density as the location of the plurality of pins extends outward from the bend.

5. (original) The method of claim 1, wherein the laminate composite structure is comprised of a solid laminate and a composite sandwich structure, the method further comprising:

terminating a plurality of the inner plies of the solid laminate such that the outer plies of the laminate composite extend to create a top face sheet and a bottom face sheet of the composite sandwich structure;

inserting a second plurality of plies of material in the laminate composite where the inner plies of the solid laminate terminate and extending the second plurality of plies of material from the point of termination of the inner plies for a specified distance, wherein the second plurality of

plies of material do not extend as long as the top face sheet and the bottom face sheet of the composite sandwich structure; and

inserting core material into a void in the laminate composite bounded by the termination of the second plurality of plies of material, the top face sheet, and the bottom face sheet.

6. (original) The method of claim 5 wherein the plurality of inner plies of the solid laminate are terminated sequentially, beginning with the innermost ply first and continuing outward toward the top and bottom face sheets, and wherein each ply of the second plurality of plies of material begins where an inner ply of the solid laminate terminates and each ply of the second plurality of plies of material terminates in the same location, creating a wedge of material plies inserted into the laminate composite.

7. (original) The method of claim 5 wherein the second plurality of plies of material are all oriented at substantially 90 degrees.

8. (withdrawn) A method for fabricating a laminate composite structure integrally comprising a solid laminate composite and composite sandwich structure, the method comprising:

layering a plurality of plies of material at interspersed orientations within a stacking sequence to create a solid laminate;

terminating a plurality of the inner plies of the solid laminate such that the outer plies of the laminate composite extend to create a top face sheet and a bottom face sheet of the composite sandwich structure;

inserting a second plurality of plies of material in the laminate composite where the inner plies of the solid laminate terminate and extending the second plurality of plies of material from the point of termination of the inner plies for a specified distance, wherein the second plurality of plies of material do not extend as long as the top face sheet and the bottom face sheet of the composite sandwich structure; and

inserting core material into a void in the laminate composite bounded by the termination of the second plurality of plies of material, the top face sheet, and the bottom face sheet.

9. (withdrawn) The method of claim 8 wherein the solid laminate is comprised of approximately 61 plies of material and the second plurality of plies of material is comprised of approximately 21 plies of material.

10. (withdrawn) The method of claim 9 wherein the bend in the solid laminate is approximately 45 degrees and the second plurality of plies of material begins approximately 0.61 inches from the bend in the solid laminate and terminates approximately 2.25 inches from the bend in the solid laminate.

11. (withdrawn) The method of claim 8 wherein the second plurality of plies of material are all oriented at substantially 90 degrees.

12. (withdrawn) The method of claim 8 wherein the plurality of inner plies of the solid laminate are terminated sequentially, beginning with the innermost ply first and continuing outward toward the top and bottom face sheets, and wherein each ply of the second plurality of plies of material begins where an inner ply of the solid laminate terminates and each ply of the second plurality of plies of material terminates in the same location, creating a wedge of material plies inserted into the laminate composite.

13. (withdrawn) The method of claim 12, wherein the wedge of material plies are inserted into the laminate composite in such a way that total number of plies in the laminate composite remains the same from the solid laminate up to the core material.

14. (withdrawn) The method of claim 8 further comprising inserting a plurality of pins into the solid laminate composite, prior to curing the laminate composite, at locations in the geometry of the solid laminate where the solid laminate forms a bend.

15. (withdrawn) The method of claim 14 whereas the plurality of pins are composite material inserted substantially normal to the laminate composite surface.

16. – 20. (cancelled)

PLEASE ADD THE FOLLOWING NEW CLAIMS

21. (new) The method of claim 1 wherein inserting a plurality of pins into the solid laminate composite comprises inserting a volume of pins such that the plurality of pins comprises approximately two percent of the volume of the solid laminate at the bend.

22. (new) The method of claim 1, wherein inserting a plurality of pins into the solid laminate composite comprises inserting a volume of pins such that the plurality of pins are equidistant from one another.